

THE Unexplained

MYSTERIES OF MIND SPACE & TIME

The Geller phenomenon
Science and astrology
Ghosts true and false
Strange tricks of fate
Criticisms of Kirlian
UFOs filmed

32



THE Unexplained

MYSTERIES OF MIND SPACE & TIME

Published weekly by Orbis Publishing Limited
Orbis House, 20/22 Bedfordbury, London WC2N 4BT

Volume 3 Issue 32

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Picture acknowledgements

Cover: Photri; Rex Features (inset); 621: Aldus Books; Rex Features (c); 622-624: Kadima Productions Inc; 625: Mary Evans Picture Library/Harry Price Collection; 626: Anglia TV; 627: Mike Hooks (tr); UPI, New York (t and c); 628: NASA (t); courtesy of Peter Warrington (b); 629: Peter Day; 630: John Cutten (l); Cooper-Bridgeman Library (r); 630-631: John Cutten (b); 631: Daniel Kleinz (t); Thelma Moss (c and b); 632: artwork by Kate Simunek; 633: Aldus Books; 634: Biblioteca Estense, Modena (t); Ellich Howe (b); 635: BBC Radio Times (t); artwork by Steve Westcott (c and b); 636: artwork by Steve Westcott (t); Associated Newspapers Ltd (b); 637: Prof. Eysenck (t); Popperfoto (l, r, bl and br); Kobal Collection (c and bc); 638: Rex Features (tl); 639: UPI, New York; 640: W. C. Reeves (t and c); Culver Pictures (b)

In next week's issue

Most photographs of UFOs are vague to say the least – and in our new series **UFO photo analysis** we describe the computer techniques used to determine the genuineness of such pictures. Did you know there are physical force fields around the human body? We show how these are linked with the strange emanations produced by **Kirlian photography**. We stay with the electrical theme in **Tom Lethbridge**, describing how the famous dowser was convinced that the static electricity in nature was capable of picking up and recording the thoughts of living creatures. C. G. Jung and his theory of synchronicity are featured in **Coincidences**. And we close with a brand new series on **Timeslips**.

This first article tells how people have found themselves suddenly transported into the past – and back to the present.

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Subscription Rates

For six months (26 issues) £15.00. for one year (52 issues) £30.00. Send your order and remittance to The Unexplained Subscriptions, Punch Subscription Services, Watling Street, Bletchley, Milton Keynes, Bucks MK2 2BW, being sure to state the number of the first issue required.

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The world of Uri Geller

Uri Geller's metal-bending magic has made him famous throughout the world. But how does he perform such baffling feats? What is the source of his remarkable power? COLIN WILSON investigates

IN THE SUMMER of 1971, the teenagers of Israel were beginning to talk about a new pop idol – not a singer or a disc jockey, but a stage magician. His name was Uri Geller, and his popularity was undoubtedly influenced by the fact that he was tall, good-looking, and only 24 years old. But the act itself was startlingly original. Who had ever heard of a 'magician' repairing broken watches by merely looking at them? Or bending spoons by gently massaging them with his finger? Or breaking metal rings without even touching them? Yet these were just a few of the 'tricks' in Geller's dazzling repertoire.

Tales of this 'magic' reached the ears of a well-known psychical researcher named Andrija Puharich, who was so intrigued that he flew from New York to Israel to investigate. On 17 August 1971, Uri Geller was performing at a discotheque in Jaffa, and it was there that Puharich went to see him.

The first thing that struck him was that Geller was a born showman; he obviously loved performing in front of an audience. Yet Puharich found most of his act disappointing. Geller began with a demonstration of mindreading. He was blindfolded, then members of the audience were asked to write words on a blackboard. It was impossible for Geller to see the board; yet he guessed correctly every time. The enthusiasm of the teenage audience showed that they found it amazing; but Puharich knew that such feats are simple if the magician has a few confederates in the audience.

But the last 'trick' impressed him more. Geller announced that he would break a ring without touching it, and a woman in the audience offered her dress ring. She was told



to show it to the audience, then hold it tightly in her hand. Geller placed his own hand above hers and held it there for a few seconds. When she opened her hand, the ring had snapped in two.

After the show, Puharich asked Geller if he would submit to a few scientific tests the next day. So far, Geller had consistently refused to be examined by 'experts'. But this time he readily agreed – to his own surprise, as he later admitted. It was a fateful decision: Geller's first step on the road to world fame.

Geller duly arrived at Puharich's apartment the next day. And his first demonstration convinced Puharich that this was genuine 'magic'. Geller placed a notepad on the table, then asked Puharich to think of three numbers. Puharich chose 4, 3 and 2:

Geller began giving demonstrations of his powers in 1968, first to groups of school children and at private parties, then to large audiences in theatres all over Israel. He said he was surprised at how well the experiments worked in front of so many people – having an audience even seemed to help

'Now turn that notepad over,' said Geller. Puharich did, and found himself looking at the figures 4, 3 and 2 – written *before* he had thought of the numbers. Geller had somehow 'influenced' him into choosing those three figures.

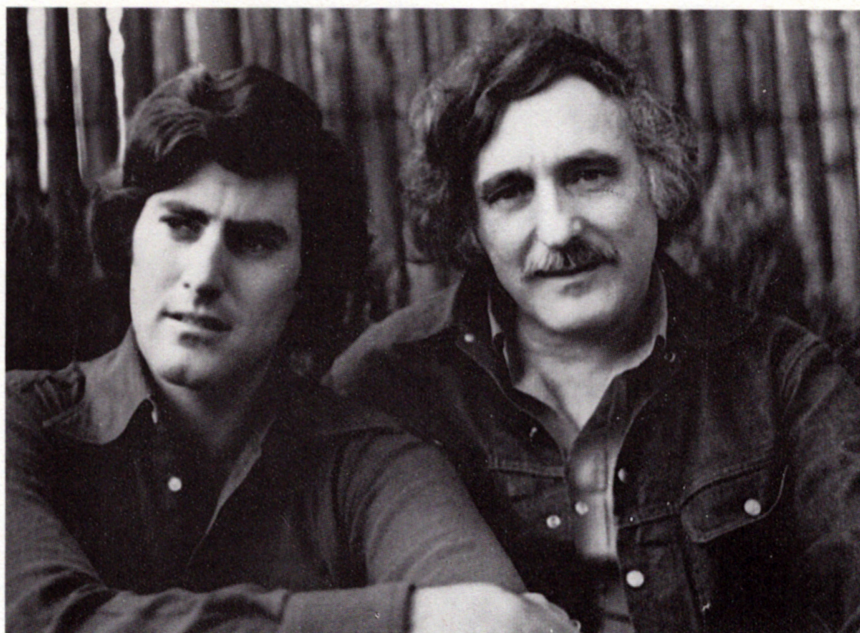
The point is worth remembering, for it suggests that Geller could hypnotise people by means of 'telepathy'. Yet whether this helps to explain the weird and incredible events that followed is open to debate.

At further demonstrations, Geller went on to raise the temperature of a thermometer by staring at it, move a compass needle by concentrating on it, and bend a stream of water from a tap by moving his finger close to it. Puharich's conclusion was that Uri Geller was no mere conjuror: he was a genuine psychic, with a definite power of 'mind over matter' – a faculty known as psychokinesis.

Geller admitted that he had no idea of how he came to possess these curious powers. He had become aware of them when he was little more than a baby. At the age of six, he realised he could read his mother's mind. She came back one day from a party at which she had played cards for money. Geller took one look at her, and was able to tell her precisely how much she had lost.

When he started to go to school, his stepfather gave him a watch. But it always seemed to be going wrong. One day, as Geller stared at it, the hands began to go faster and faster, until they were whirling around. It was then that he began to suspect he might be causing it. Yet he seemed to have no control over this freakish ability. One day, when he was eating soup in a restaurant, the bowl fell off the spoon. Then spoons and forks on nearby tables began to bend. Geller's parents were so worried they even thought of taking him to see a psychiatrist.

By the age of 13, he was beginning to gain some kind of control over his powers. He broke a lock on a bicycle by concentrating on it, and learned to cheat at exams by reading the minds of more diligent pupils – he said he



only had to stare at the backs of their heads to see the answers.

Puharich was intensely excited; it looked as if he had made the find of the century. Ever since the formation of the Society for Psychical Research in 1882, scientists have been studying psychics and mediums, trying to prove or disprove their claims. They have never succeeded in doing either. And the reason is mainly that most psychics claim they cannot switch their powers on and off at will. Yet Geller's powers seemed to work to order, whenever he wanted them to. If they would work in a laboratory as well as on stage, it would be one of the greatest triumphs in the history of psychical research.

At this point, events took a completely unexpected turn. On the morning of 1 December 1971 Geller was hypnotised by Puharich in the hope of uncovering clues about the origin of his powers. Puharich asked him where he was; Geller replied that he was in a cave in Cyprus – where his family had lived

American psychical researcher Andrija Puharich who investigated Uri Geller in the early 1970s. His account of his experiences with Geller was published in 1974 and made the astonishing claim that Geller was the messenger of the Nine, a group of extra-terrestrial beings who were the 'controllers of the Universe'.



Interest in Geller and his paranormal powers grew rapidly and a multitude of books about him appeared in the 1970s. Geller himself is an author – his autobiography, *My story*, was published in 1975, and many of his poems, which he says seem to 'come through' him rather than being composed by him, have been set to music and recorded.

when he was 13 – and that he was ‘learning about people who come from space.’ He added that he was not yet allowed to talk about this. Puharich regressed him further, and Geller began to speak in Hebrew – the first language he had learned. At this point he described an episode that, he said, had taken place when he was three years old. He had walked into a garden in Tel Aviv, and suddenly become aware of a shining, bowl-like object floating in the air above his head. There was a high, ringing sound in the air. As the object came closer, Uri felt himself bathed in light, and fell down in a faint.

As Geller recounted these events, Puharich and his fellow investigators were startled to hear a voice speaking from the air above their heads. Puharich described it as ‘unearthly and metallic’. ‘It was we who found Uri in the garden when he was three,’ said the disembodied voice. ‘He is our helper, sent to help man. We programmed him in the garden.’ The reason, it explained, was that mankind was on the point of a world war. Uri, it implied, had been ‘programmed’ to avert the catastrophe.

The voice stopped speaking. When Geller woke up, he seemed to have no memory of what had happened; so Puharich played the tape back. As he listened to his voice recounting the episode in the garden, Geller looked worried. ‘I can’t remember any of this.’ And then, as the metallic voice began to speak, Geller snatched the cassette off the recorder. As he held it in his hand, it vanished. Then Geller rushed from the room. When they found him, some time later, he seemed to be

Geller’s powers began to manifest themselves when he was a small child: he found that he could read his mother’s mind, affect the workings of clocks and watches simply by looking at them, and cause spoons and forks to bend or break. At first his parents were merely embarrassed by the extraordinary events that occurred, but then they became concerned that something was wrong with him, and even considered consulting a psychiatrist

confused, and there was no sign of the tape.

What had happened? The sceptical explanation is that Geller performed a little ventriloquism, then palmed the tape and made sure it ‘disappeared’, so that subsequent tests would not reveal the resemblance between his own voice and the ‘space being’ on the tape. But Puharich and the others said the voice came from above their heads, and that it sounded mechanical, as if manufactured by a computer. And even if Geller could have tricked a number of trained observers on this first occasion, it would certainly have been quite impossible on some later occasions described by Puharich. For the bodiless voice was only the first in a series of weird and inexplicable events – events that finally destroyed all Puharich’s hopes of convincing the world that Geller’s powers were genuine.

These events are described by Puharich in his book *Uri: a journal of the mystery of Uri Geller*. And they sound so confused and preposterous that the reader ends by doubting Puharich’s common sense, then his sanity. He describes how, the following day, he recorded yet another hypnotic session with Geller, and how the ‘voice’ again interrupted and talked about war. Then Puharich and Geller went for a drive, taking the recorder with them, and the tape suddenly vanished into thin air. From then on, hardly a day went past without the mysterious ‘entities’ performing some mind-boggling trick to convince Puharich of their reality. They made the car engine stop, and then start up again. They ‘teleported’ Puharich’s briefcase from his house in New York to his apartment in Tel Aviv. When Geller and Puharich went to an army base to entertain the troops, they were followed by a red light in the sky that was invisible to their military escort. Geller actually photographed a ‘space ship’ on the orders of the metallic voice.

Was it a joke? Or some kind of trickery? Puharich, at least, was convinced that no



fraud was involved. A few years before, a psychic had given him messages from some mysterious beings who called themselves the 'Nine', and who said they came from outer space. And at one of the hypnotic sessions with Geller, Puharich asked whether the voice was one of the Nine, and it answered 'Yes'. He went on to ask if the Nine were behind the UFO sightings that had been taking place since Kenneth Arnold saw the first 'flying saucer' in 1947; again the answer was 'Yes'. The voice told Puharich that the Nine were beings from another dimension, and that they lived in a star ship called *Spectra*, which was '53,069 light ages away'. They had been watching Earth for thousands of years, and had landed in South America 3000 years ago. And they would soon prove their existence by landing on planet Earth. . . .

It is easy to jeer at all this, and to condemn



Puharich for his gullibility. The simple explanation seems to be that Geller had been reading Erich von Däniken's *Chariots of the gods?* and decided to fool the naïve Puharich with this preposterous gobbledegook about space beings and star ships. Yet if Puharich's description of the various events is accurate, this is totally impossible. No doubt Geller could have palmed the cassettes, imitated the metallic voice, and faked the photograph of a UFO. But it is hard to see how he could have transported Puharich's briefcase from New York, caused the car engine to stop and start, and arranged for them to be followed by a red light that was invisible to the soldiers who were escorting them.

Could Puharich himself be telling lies? This hypothesis must also be ruled out. Puharich's aim was simply to prove that Geller possessed paranormal powers, and all he had to do was to arrange for scientific tests

A photograph taken on 4 November 1972 by Geller when travelling by jet from London to Munich. According to Geller, his camera rose into the air of its own accord and stopped in front of him, as if signalling him to take a picture. Geller could see nothing in the sky but nevertheless took several shots. When the film was developed, five frames contained images of UFOs alongside the aeroplane

of these powers – as he later did in the United States. Far from making his case more convincing or interesting, all this talk about *Spectra* and the Nine only makes it sound absurd. By writing about it, he only destroyed his own credibility.

Does this mean, then, that the Nine were genuine, and that they have really chosen Geller to be their emissary on Earth? This is equally difficult to accept – and Geller says that he himself does not accept it. Then what *does* he believe? The answer is: nothing. He declares that the events described by Puharich leave him totally bewildered, and that he has no idea of their explanation.

Geller himself was becoming rather worried by all these strange events by the beginning of 1972. Unlike Puharich, he had no desire to convince the scientific establishment of the reality of his powers; he was more interested in becoming rich and famous. And the bewildering tricks performed by the Nine seemed unlikely to bring him closer to that goal. The same thing applied to Puharich, with all his talk about scientific proof and laboratory testing. Geller must have heaved a sigh of relief when, in April 1972, Puharich flew back to New York, promising to return in a few weeks. He proceeded to finalise plans to display his psychic talents in Germany, under the guidance of a professional impressario.

A sign from the Nine

Another curious event, described in *Uri*, guaranteed that Geller was able to make this trip to Germany alone. According to Puharich, Geller went into his apartment on 1 June 1972, and found a letter from Puharich on the mat. It stated simply that Puharich was unable to leave the United States for another three months, and would join Geller later. Accordingly, Geller flew on to Rome – en route for Munich – and telephoned Puharich to ask about the delay. Puharich was amazed, and denied writing any such letter. At which point, it struck them both that the letter must be yet another 'sign' from the Nine. The 'proof' was that it had vanished from Geller's shirt-pocket while he was on the aeroplane – obviously dematerialised by the owner of the metallic voice. A simpler explanation might be that Geller had invented the letter. But then, its appearance and disappearance are no more incredible than all the other baffling events described by Puharich.

Whatever the explanation, the letter incident convinced Puharich that the Nine wanted him to remain behind in the United States, trying to convince various eminent scientists that Geller was worth investigating. Meanwhile, his volatile and unpredictable protégé flew on to Munich, to keep his first appointment with fame and fortune – or at least, with notoriety and publicity.

On page 666: what happened when Geller's strange powers were investigated by scientists

A serious ghost investigation is long and arduous, and some publicity-conscious authors find it profitable not to be too critical of the cases they retail. GUY LYON PLAYFAIR discusses some examples of good and bad ghost-hunting

'THE MOST HAUNTED HOUSE in England' was a local inhabitant's description of Borley Rectory, on the Essex-Suffolk border, when he gave directions to a motorist in 1929. The driver was Harry Price, self-styled ghost-hunter and the most energetic and controversial psychical researcher of the century. He found his way to Borley, where he found – or claimed to have found – the ingredients for a series of books, radio broadcasts and newspaper articles that he was to produce for the rest of his life. The case apparently had everything: ringing bells, strange lights, footsteps, flying stones, a skull wrapped in brown paper, mysterious writing on walls, and, of course, a ghost. Local legend had it that the rectory was built on the site of a monastery, from which a monk had unsuccessfully tried to elope with a young lady from a nearby nunnery. Both had been caught and executed, but the nun and the monk (minus his head) and the coach they used were said to be still around. Borley Rectory, Harry Price claimed, was 'the best-authenticated case of haunting in the annals of psychical research.'

This would be welcome news indeed, for

A brick flung through the air at the site of the ruined Borley Rectory is captured on film by a *Life* magazine photographer. Harry Price, who was present at the time, later cited this picture as photographic evidence of poltergeist activity at Borley – without mentioning the workman who was demolishing a nearby wall when the picture was taken

surprisingly, although ghosts have been seen over the centuries, very few have ever been investigated thoroughly in order to learn their true nature. But had Price authenticated the Borley hauntings?

Not in the opinion of a team of members of the Society for Psychical Research (SPR), who tore the case to pieces in a devastating report published in 1956. Not only, they claimed, was there no proper evidence for any paranormal occurrences at Borley, but some of the reported phenomena had very probably been caused by Price himself. They quoted one outright accusation of fraud, made by a *Daily Mail* reporter, Charles Sutton, after Price's death:

Many things happened the night I spent in the famous Borley Rectory with Harry Price and one of his colleagues, including one uncomfortable moment when a large pebble hit me on the head.

After much noisy 'phenomena' I seized Harry and found his pockets full of bricks and pebbles. This was one 'phenomenon' he could not explain, so I rushed to the nearest village to 'phone the *Daily Mail* with my story, but after a conference with the lawyer my story was killed.

Even some of Price's fellow investigators concluded that he was more interested in a good story than in the truth of the case. A

Ghosts true and false



typical example of this was given by a *Life* magazine reporter, Cynthia Ledsham, who visited Borley with Price and a photographer in 1944. The rectory, which had burned down in 1939, was being demolished. The photographer took a distant shot of the ruins, which showed a brick flying through the air. Price later claimed that this could be 'the first photograph ever taken of a Poltergeist projectile in flight'. However, the reporter later admitted to the SPR investigators that while the picture was being taken a workman was dismantling a wall nearby, throwing bricks at regular intervals. She accused Price of 'the most bare-faced hocus pocus'.

Price's account of the haunting was demolished as surely as the building itself. The rectory had not been built on the site of a monastery after all. The 'nun' who had been spotted by a newspaper reporter 'flitting about in the gloom' was in fact the maid, a lively girl who later admitted to having carried out a spot of poltergeist activity herself. One former occupant of the rectory declared it to have been haunted by no more than 'rats and local superstition'. Another, the source of a great deal of the anecdotal material (which Price himself privately admitted to not believing), turned out to have lived previously near Amherst in Nova Scotia, scene of a well-publicised 19th-century haunting with many remarkable similarities to the alleged happenings at Borley. And so the indictment continues through 180 pages of a special issue of the SPR's *Proceedings* wholly devoted to an

exposé of Price's bold claims.

In Trevor H. Hall's *Search for Harry Price* (1948), the 'ghost-hunter extraordinary' is depicted as a publicity-seeking charlatan and an unscrupulous liar. Although argument was still raging in 1980 in the pages of the SPR's *Journal* over both the facts of the Borley case and the integrity of its investigator-publicist, it cannot be claimed that Price made any useful contribution at all to our understanding of ghosts, or that there is any reason to believe a word of what he wrote about Borley.

Shock, horror, thrills

One moral of this lamentable episode seems to be that it is all too easy, and profitable, to offer the public what it wants – shock, horror and occult thrills. It is much more difficult and costly to do the painstaking work of a good investigator. The late Jay Anson, who scripted the film based on the novel *The exorcist*, made an estimated £3 million from his book *The Amityville horror*, but he had no first-hand experience of this case whatsoever. A researcher who followed up the case, Dr Stephen Kaplan, dismissed the book as 'mostly fiction'. Another writer who investigated the story, Melvin Harris, has written that 'there is plenty of evidence which shows unambiguously that the Amityville story is a gross fabrication'.

How, then, should ghosts be hunted? In an ideal world, funds, personnel and equipment would be available for an enquiry as thoroughly conducted as a police murder

Right: wreckage scattered over Florida swampland after the crash of Eastern Airlines' flight 401 on 29 December 1972, with two of the crew who died. The ghosts of the pilot, Bob Loft (top), and the second officer, Don Repo (below), were later seen on other Eastern Airlines Tri-Star flights (inset)

A television special

In 1964 Anglia Television filmed a documentary at an allegedly haunted 16th-century manor house, Morley Old Hall in Norfolk. Anthony D. Cornell (below left) demonstrated how a ghost-hunter worked. After a night's investigation, he was interviewed in the room where the ghost was said to have appeared. He concluded there was little evidence for the haunting.

Five people contacted the television

company to say that they had seen a 'hooded monk' standing between Cornell and the interviewer, Michael Robson. Although Robson could see nothing when he re-ran the film, he decided to broadcast it again. Viewers were asked to write in if they saw anything odd.

Twenty-seven viewers wrote in. Fifteen said they had seen a monk or priest; one said it was a lady in a mantilla; one said it was a hooded skull.

When some of the relevant frames were enlarged, certain markings were at last seen that corresponded with drawings sent in by viewers. They proved to be due to dampness on the stonework.

As Anthony Cornell commented, the case was of interest to psychical researchers. The dim lighting of the television screen and the 'atmosphere' engendered by the rest of the film favoured 'spectral' appearances. Secondly, an impressive number of witnesses sited the 'figure' exactly at the spot where a physical cause was later found. Lastly, although the markings were vague, many of the witnesses were in substantial agreement about the 'figure' they saw.





hunt, or as research into sub-atomic particles or the mating habits of cockroaches. But they are not available, and the work is left to individual investigators, many of whom understandably make a living by writing about their experiences. The best to be hoped for is that such individuals will record as much first-hand evidence as they can, as soon as possible after the event.

While the perfect ghost investigation has yet to be recorded, at least two cases of the 1970s were researched and written up in considerable detail. One consisted of a series of apparitions on board several jumbo jets of an American airline.

Airborne apparitions

An Eastern Airlines Tri-Star, flight 401, crashed in December 1972 in a Florida swamp, killing 101 people. The ghosts of the pilot, Bob Loft, and his flight engineer, Don Repo, were seen on more than twenty occasions by crew members of other Eastern Tri-Stars, especially those that had been fitted with salvaged parts of the crashed plane. The apparitions were invariably described as wholly lifelike. They were reported both by men and women who had known Loft and Repo and by others who had not, but who recognised them later from photographs. The haunting became well-known among



people in the airline community, and an account of it even appeared in the newsletter of the US Flight Safety Foundation, in 1974.

An author, John G. Fuller, made thorough investigations of the case with the help of several airline personnel. They produced a mass of compelling testimony, including claims that log books recording apparitions had been withdrawn and crew members reporting them had been threatened with a visit to the company psychiatrist. Moreover, a seance was eventually held in the presence of Repo's widow at which evidence was produced that satisfied her of her husband's continuing existence. This would be a near-perfect case if the airline had co-operated but, perhaps understandably, it did not.

It is to be hoped that future ghosts will be as visible and informative as Loft and Repo, and that future hunters will be as determined as the investigators of this famous case. Ghost-hunting, says Andrew Green, himself an expert in the art, 'enlarges the field of knowledge, which is in itself a valid reason for any pursuit.' But for the dedicated ghost-hunter, the sheer fascination of the chase is a sufficient spur.

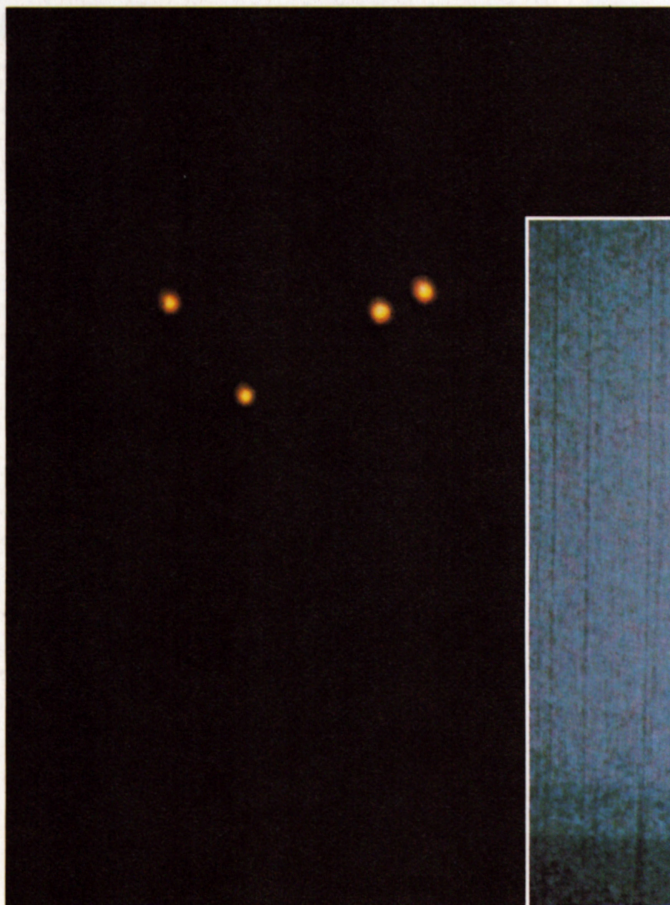
On page 678: how to investigate a ghost, and how to get rid of it

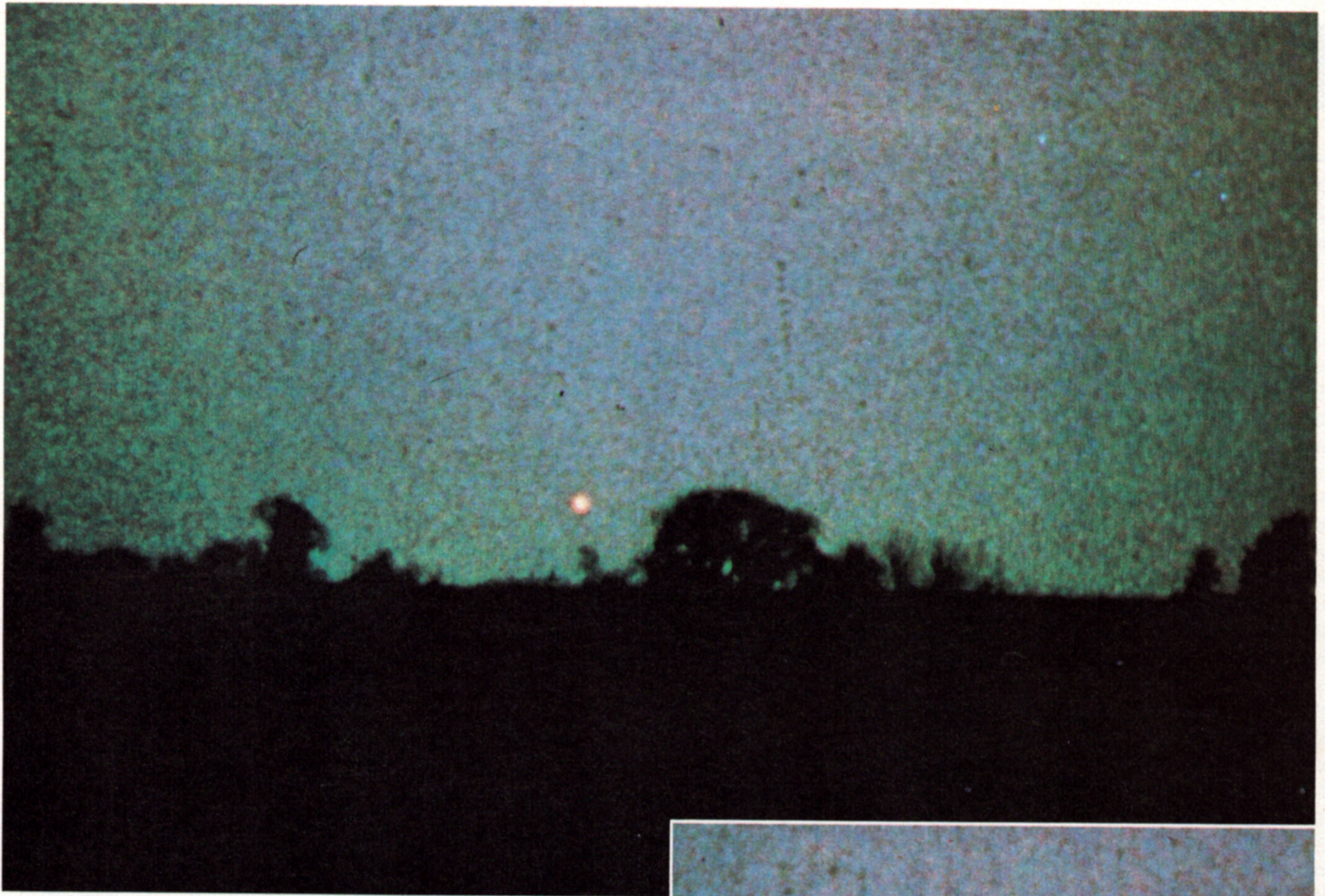


Above: a view of the Earth's surface showing the blue glow of the atmosphere at the horizon, cloud formations, and, apparently, a small round UFO (to the right of the picture). Taken by astronaut M. Scott Carpenter from *Aurora 7* 1000 miles (1600 kilometres) above the Earth, this picture has been acclaimed as conclusive evidence for rumours about the frequent 'buzzing' of

NASA space capsules by UFOs. In fact the object following this capsule so attentively is an IFO (Identified Flying Object), being the meteorological balloon towed behind the capsule.

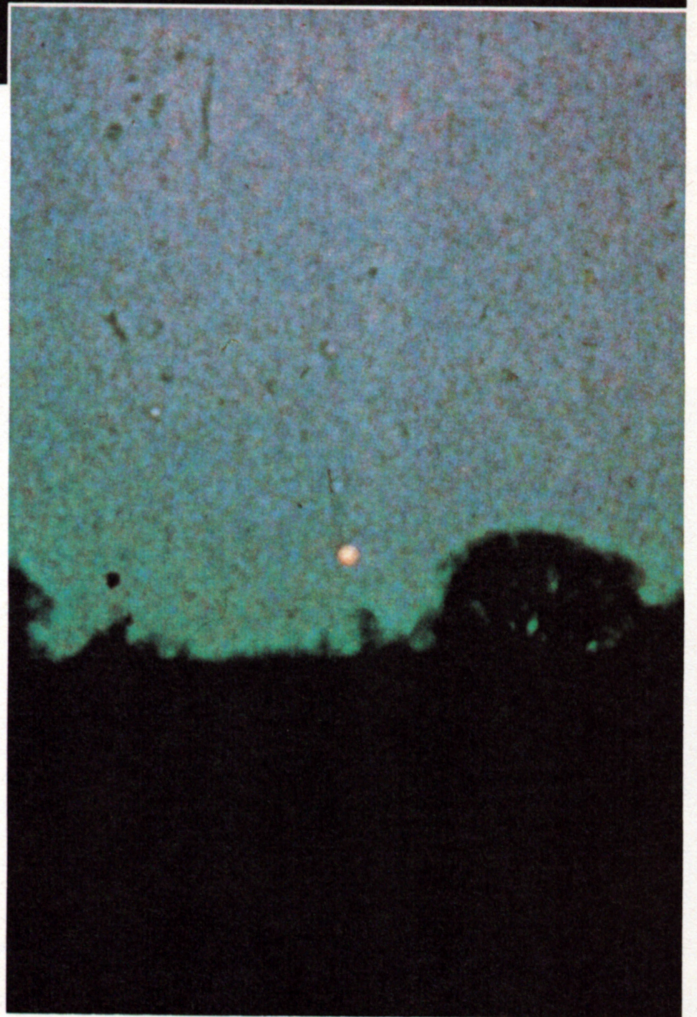
Left and below: two frames from a ciné film of unidentified lights that were seen over Stonehenge by Mr John Flattley's and a friend's families on 18 October 1977. They described silent, erratically moving lights; sometimes only one could be seen and at other times as many as seven or eight were clearly visible. At one point they seemed to hang motionless in the sky for very long periods. The nearby Army base has been blamed for the lights but all the witnesses state unequivocally that they 'adamantly reject the explanation of military flares' – but could the Army be responsible for something more sinister?





Above and right: a UFO captured on ciné film on the morning of 11 January 1973 by Mr Peter Day on the road close to Cuddington (between Thame and Aylesbury, England). He had been watching the UFO for about a minute before he was able to park his car and use his 8-millimetre ciné camera to record it. The object emerged from behind the trees and travelled horizontally from left to right at a low altitude. Peter Day said the UFO seemed to be flickering or pulsating; this is reflected in the difference in brightness of the object between the two consecutive frames of his film shown here. He 'caught' the object for 15 seconds only as it zoomed across the tops of the trees. He said that it was 'there one second, gone the next'. Although Mr Day was alone during the sighting, a number of children and teachers at a school some miles away confirmed the sudden appearance and abrupt disappearance of a UFO at approximately the same time as his sighting. The *Thame Gazette* of 16 January 1973 quoted one of the children as describing the object as 'a huge blob of orange fire'. The UFO was said to have approached within a few hundred yards of the school, illuminating the ground with a bright orange glow as it passed by. One of the teachers told Mr Day that the object had hung motionless above and ahead of her for a few seconds. She noted that it looked like a ball at the top, but was flat at the bottom, and the whole object was spinning.

Ciné films of UFOs — such as those described here — are important for a number of reasons: imagination on part of the witnesses can be ruled out entirely; a moving object is extremely difficult to fake; relative distances — of the object and trees, houses, the Sun or stars for example — can be more easily estimated than from a still photograph; the behaviour of the UFO can be compared with that of aircraft lights, helicopters, military flares and so on; the usual 'explanations' — of flocks of birds, the planet Venus and weather balloons — can be eliminated; and the moving pictures can be 'frozen' frame by frame for analysis.



A crack in Kirlian's halo

Its champions claim that Kirlian photography can reveal a subject's character, emotional state, medical condition – even his very soul. But, says A.J. ELLISON, there is very little about the process that is strictly paranormal

IN THE MID 1960s I received from an academic staff member at a certain university a set of photographs – so-called Kirlian photographs. One was of a freshly cut leaf, the second was of the leaf after a piece had been cut out of it, the third was of a dead leaf. He told me how the photographs had been produced – in the way now known as Kirlian photography. His accompanying letter referred to the pattern of 'vital forces' shown by the bright tracks, spots of light and radiation surrounding the living leaf, the shadowy signs of an 'etheric body' of the part of the leaf that had been cut off, and the complete loss of all life and fire of the dead leaf, all the 'vital forces' having disappeared with death. He asked me, as an electrical engineer having some familiarity with high voltage discharge phenomena, and also as a Theosophist having a background of many years of study of etheric and astral bodies, of prana and such like, if I did not agree that the electric discharge was showing up remarkably clearly these 'subtle forces of life'.

I looked at the Kirlian photographs carefully, with an open mind. And the explanation seemed quite clear to me. As an independent check I consulted a colleague having a particularly distinguished reputation in the field of high voltage electrical discharge phenomena. It seemed quite clear to him too and we agreed. The differences between the photographs of the living and dead leaves were due entirely to the presence of the sap in the living leaf.

An 'etheric body' explained

But what of the etheric body of the cut leaf? The likeliest explanation of this was that the electrodes had not been carefully cleaned between the taking of the two photographs of the whole and cut leaf. So I looked (the opportunity occurred later) for evidence of this. A competent experimenter would know that the electrodes had to be cleaned carefully between the taking of the two photographs to remove all traces left during the first exposure, and he would have referred in his report specifically to this careful cleaning and inspection of the electrodes. No such reference was to be found.

So we had a perfectly good explanation of the pictures, which agreed with the description of how they had been made. We also had reason to suspect the competence of the experimenter.

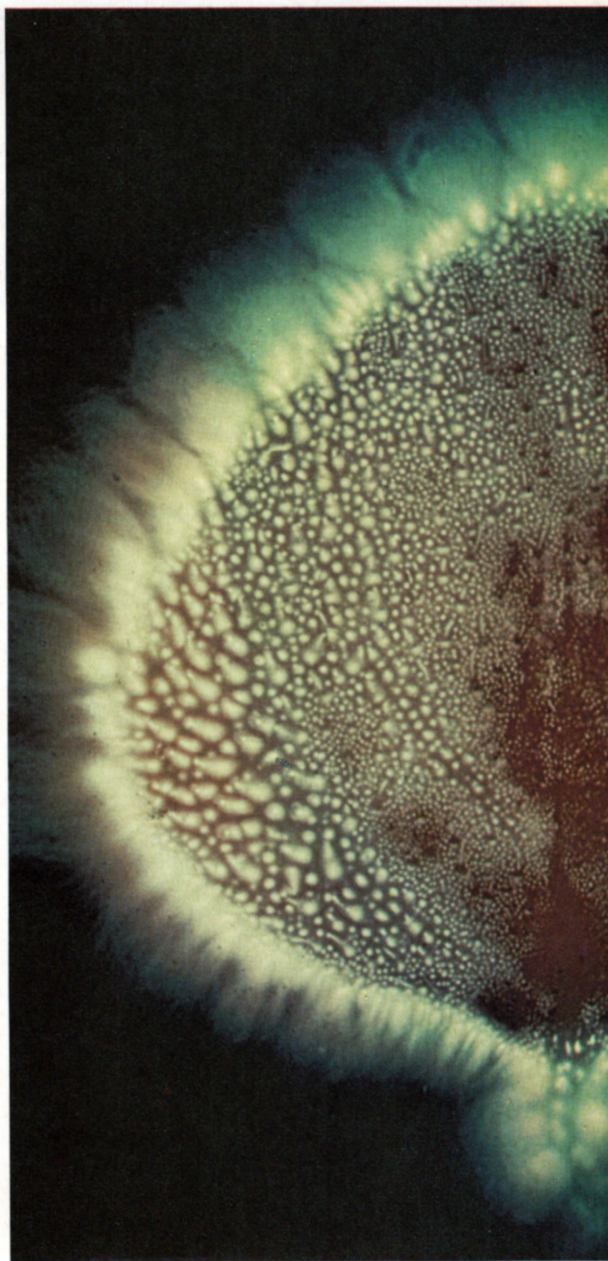
I replied to my academic colleague to the

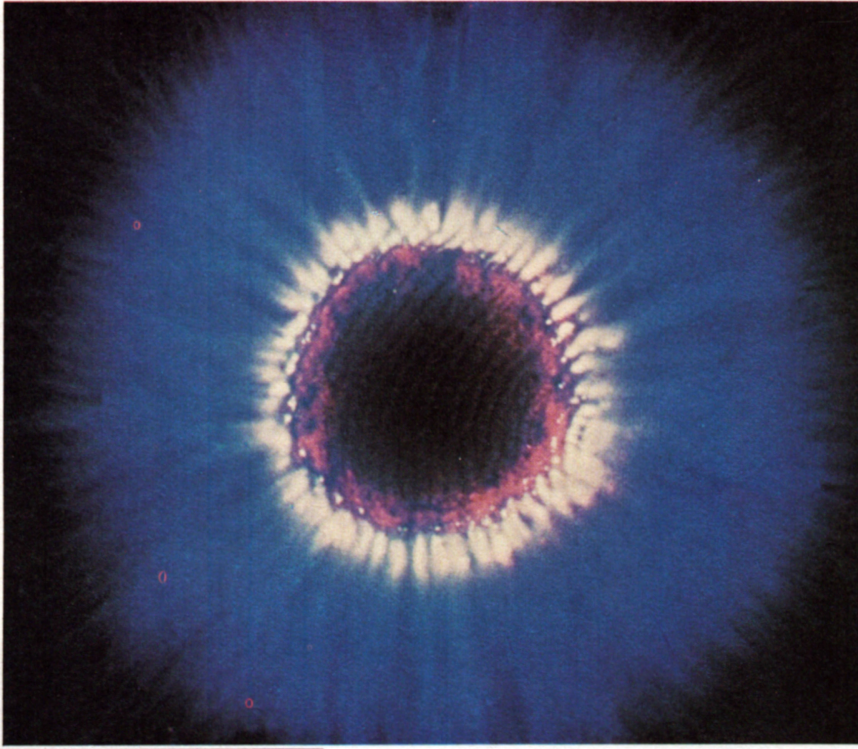


Above: Arthur J. Ellison has had a distinguished career as a psychical researcher and as a scientist. A former president of the Society for Psychical Research, he is Professor of Electronic and Electrical Engineering at the City University, London

Above right: a detail from Matthias Grünewald's 16th-century altar painting in Isenheim, Alsace, showing the Virgin Mary surrounded by a halo. Artists have long signified the holiness of saints by portraying them emitting a heavenly radiance, which has been identified with the human aura or 'etheric body'. Some sensitives are apparently able to see the human aura, and it has been claimed that the Kirlian photographic process captures it on film

Right: this Kirlian photograph shows a rose leaf from which a small section has been cut – yet its 'ghost' remains visible. This has been described as scientific proof of a non-physical dimension to life – but the appearance of the 'spirit' of the leaf is probably due to physical traces of the whole leaf on the electrodes



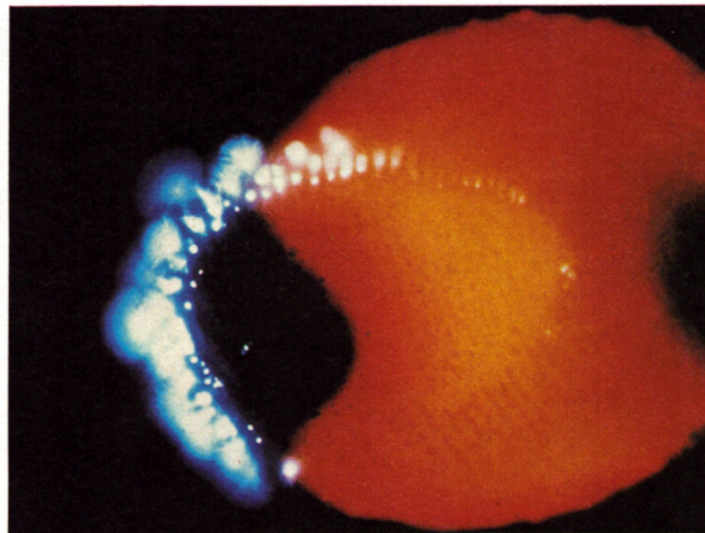
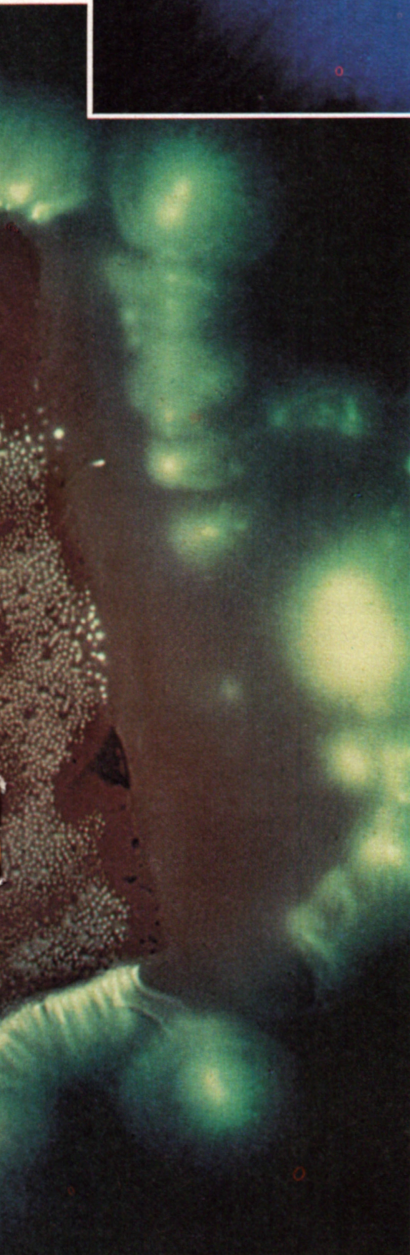


scientific method, either.

Most, if not all, writers on Kirlian photography, describing and evaluating their own 'researches' or those of others, are not competent to evaluate high voltage electrical discharges. Why should they be? This is a very specialised area of work involving a long professional training. It is clear why, to such writers, electric fields and discharges are just as mysterious as the etheric body is to the ordinary down-to-earth scientist who does not interest himself in such matters.

Further, such writers have not studied the scientific literature on the 'subtle bodies'. The term 'subtle body' is used by psychical researchers to describe bodies other than the physical body, which exist in a number of interpenetrating levels of consciousness. The first subtle body is the 'etheric' body, which – unrecognised by conventional science – is believed to carry 'life energies' of various kinds. It acts as a kind of bridge between the dense physical body and the more subtle astral body. Subtler still is the mental body, or mind; and there are supposed to be yet subtler bodies.

These subtle bodies are not made of some



Some vivid examples of Kirlian photography made by Thelma Moss, a respected American researcher:

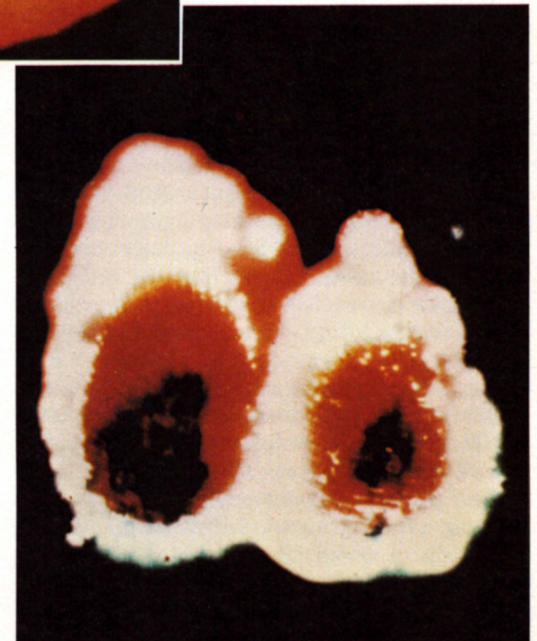
Top: high frequency corona discharge from the finger of a relaxed person

Centre: photograph of the same finger of the same subject while under emotional stress

Below: fingertips of a subject who had taken marijuana

effect that in any further studies of Kirlian photography he would be well advised to seek the collaboration of a competent electrical engineer familiar with high voltage discharges. And I suggested that there was no need to involve 'subtle forces as yet unknown to science' until the normal explanations were exhausted. They were, of course, 'normal' only to an appropriately experienced electrical expert. To my colleague, who was not an electrical engineer, and to many others, the electrical phenomena were, and are, just as mysterious as the claimed 'occult' phenomena.

The perceptive reader of material on Kirlian photography will find that many writers on the subject have no knowledge of electrical engineering, even though high voltage discharges are the basis of Kirlian photography. Many have no knowledge of the

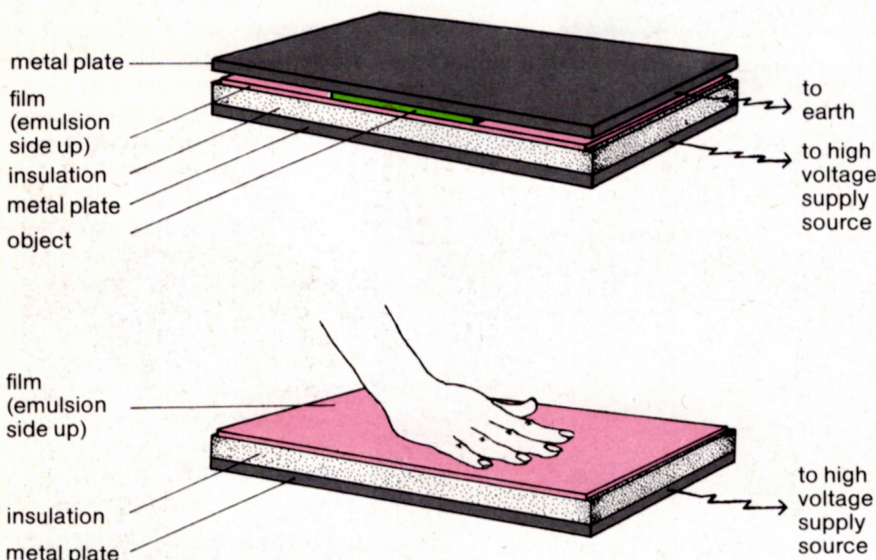


kind of 'subtle matter', which interpenetrates the physical body and projects all round. This is an entirely misguided way of looking at the matter. The subtle bodies are in 'other spaces', despite the fact that to the 'clairvoyance' of a psychic they do appear to interpenetrate the physical body.

A comparison might be made to 'waking dreaming'. The objects in the dream space are not to be considered as interpenetrating the physical world space and having position in it. This is quite easy for anyone to understand and has been shown clearly by experiments in which the position of someone's physical body has been screened while the psychic observed the etheric body. A psychic is unable to tell the position of the physical body by observation of a 'subtle body'. The experiments were carried out with the willing collaboration of some 20 experienced psychics and the results all agreed. It is most unlikely that there will ever be any physical way of making the etheric body visible to ordinary sight.

The unscientific writers also go wrong as a

Below: Kirlian apparatus employs this 'sandwich' arrangement. When an object such as a leaf is to be photographed, it is placed between the upper (earthed) plate and the film surface. When a fingertip, hand or some other part of the body is photographed, no upper electrode is required since the subject is, in normal conditions, earthed. If he is not properly earthed, however – perhaps because he has shoes with rubber soles, or is on a carpet with a rubber underlay – there may be a loss of quality in the Kirlian picture obtained



result of not understanding how to apply the scientific method, especially how to remove from experiments, and their evaluation, the biases and preconceptions of the observer by using double-blind techniques. And they use *post hoc* reasoning: because a particularly dull picture happened to be followed by the illness of the subject, therefore the dullness was due to the incipient illness. They often select evidence that agrees with their preconceptions and ignore the rest. Some examples will illustrate mistakes listed above.

It is becoming quite common these days to get Kirlian photographs of fingertips or indeed of larger areas of the body. The Kirlian apparatus consists of a 'sandwich' made up of a flat metal electrode, a sheet of insulating material, a piece of colour film, and a second, earthed, electrode. In this case the finger is the second electrode, and is placed on the piece of film (emulsion side

Controlling the experiment

Dr Yoshiaki Omura proposes that these 24 points should be carefully specified in reports of Kirlian experiments:

1. High voltage frequency, measured at the power source and at the subject.
2. Oscilloscopic photograph showing waveform of the source.
3. Approximate range of output impedance of the source.
4. Approximate maximum voltage or voltage ranges, as well as waveform, polarities, duration, rise-and-fall time and repetition rate of the pulses.
5. Minimum and maximum distance between electrode plate and subject.
6. Details of the insulator between the electrode and the subject, with its size and geometrical arrangement.
7. Parameters of high voltage electrode plates (including shape, size and kind of metal and surface condition).
8. Name and characteristics of the film.
9. Electrode-to-film and specimen-to-film distances.
10. Exposure time for film and subject.

upwards), the sheet of insulation material below it forming the sandwich filling, with the metal plate below it connected to the high voltage supply source. The owner of the finger is at earth potential and the frequency is made sufficiently high so that he does not receive shock.

An earlier series of articles (see pages 50–53 and 94–97) showed several such fingertip pictures, some of which are claimed to indicate vibrant health (a bright discharge with lots of 'vital subtle forces flowing') and others to show illness or disease, real or potential, indicated by a very dull pattern of discharges. There were also photographs produced by psychics, first with the psychic doing nothing special, and second with the psychic 'force' switched on.

Important variables

Such claims involve comparisons among Kirlian pictures. A basic principle of the scientific method is that every variable except the one being compared must be the same, or at least controlled so that the effects of variations in these other variables are known. What variables are important as likely to influence the fingertip Kirlian picture when that picture is produced in the way described? Clearly, first the pressure of the finger. This would appear to be the most important variable of all, because the spaces under and around the finger and between the other members of the Kirlian 'sandwich' can crucially affect the form of the discharge.

11. Grounding conditions and approximate current through the subject.
12. Range of surface temperatures of the subject.
13. Electrical conductivity of the surface areas of the subject and the method used for measurement.
14. Whether (and how) the surface of the subject has been washed and cleaned.
15. Environmental conditions, including atmospheric pressure, room temperature, humidity, and degree of air pollution.
16. Pressure (approximate) exerted on the subject and the area of contact of subject with the surface of the film.
17. Vital signs (biological activity) before and after Kirlian photography.
18. Safety precautions.
19. Experimental set-up, shown in photographs or schematic diagram.
20. Voltage-current curves recorded by oscilloscope during photography.
21. Blood chemistry of subject.
22. Factors influencing circulatory conditions of various parts of the body.
23. Micro-circulatory states of the area of the body to be photographed.
24. Other pertinent information about subjects or procedure.

Other factors are clearly of importance too, such as the temperature, humidity of the air, voltage waveform and consistency, the duration of the discharge with its frequency, and the consistency of the film. There are, according to Professor Omura of the International Kirlian Research Association, 24 different variables that should be controlled. If at least the more important of these are not controlled then any comparison of Kirlian pictures is *meaningless*.

Some users of the Kirlian technique do not even measure and control the pressure of the subject's finger on the film. Their results are valueless and any deductions made from them are unlikely to be useful.

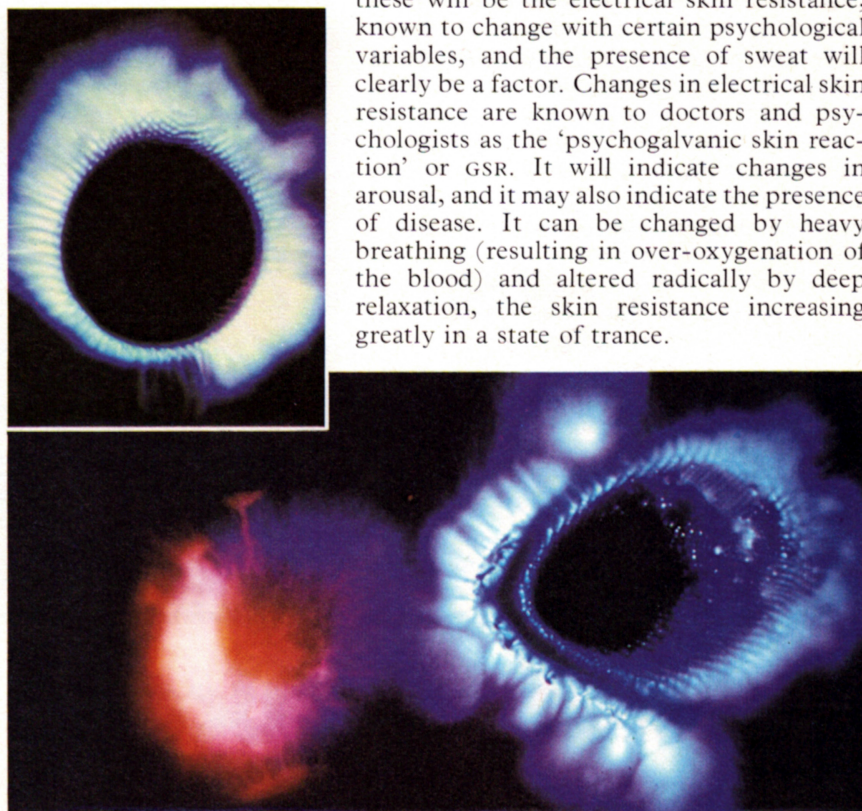
Let us take another example. Several years ago claims were made that, if a single Kirlian photograph were taken of the fingertips of two people who had not previously met, then each would show the 'normal' pattern; but if the experiment were repeated using two subjects who loved each other then their 'auras' (shown by the discharges) would be seen at least partially to merge. This claim was illustrated by striking Kirlian photographs. However, it would seem that the photographs had been selected from a large number of photographs that were not shown, probably because many of these did not show the desired effect.

Let us look at the way in which all the variables can be properly controlled so that pictures in which only one variable is changed can be compared. The controls should be

checked by repeated photographs in which nothing has been changed: an artificial finger should be used with all the other variables unaltered. The photographs will then depend only on the type of film (the nature and distribution of the emulsions), the waveform and magnitude of the voltage, the thickness and material of the sandwich layers, and the number of discharges used on each occasion.

Reactions of the skin

When everything has been controlled and checked, the subject's finger may be placed on the pad. The changes in the picture will now depend on the physical/electrical parameters of the finger. The most important of these will be the electrical skin resistance, known to change with certain psychological variables, and the presence of sweat will clearly be a factor. Changes in electrical skin resistance are known to doctors and psychologists as the 'psychogalvanic skin reaction' or GSR. It will indicate changes in arousal, and it may also indicate the presence of disease. It can be changed by heavy breathing (resulting in over-oxygenation of the blood) and altered radically by deep relaxation, the skin resistance increasing greatly in a state of trance.



Above: fingertip Kirlian photographs obtained from a famous sensitive – Uri Geller. The upper picture shows the pattern obtained when Geller was at rest; the lower one, allegedly showing a burst of 'psychic energy', was taken after he had been invited to use his peculiar powers. What is perhaps more likely is that Geller, in concentrating, exerted extra pressure on his fingertips – or simply perspired more – and so altered the corona discharge around his finger

It is clear that properly controlled scientific experiments by competent people may well indicate that Kirlian photography has some diagnostic potential. But the emphasis has to be on proper control of the variables and sufficient experiments to be amenable to statistical evaluation, all human beings varying over a wide range in almost every respect. Such a study requires the collaboration of researchers from several disciplines – at least from electrical engineering and physiology – and is not easy. It has some possible value when carried out by trained people, but it is difficult to see any value at all in much of the material that is now being produced and published by experimenters who appear to have no qualifications to undertake such a difficult multi-faceted scientific study.

What actually happens when a Kirlian photograph is taken? See page 650

In the past 20 years, researchers have produced some startling evidence that appears to back up traditional astrological beliefs. BRIAN INNES concludes his series with an investigation of this work

WHEN THE YOUNG FRENCH STATISTICIAN Michel Gauquelin began his investigations in 1950, it was his intention to prove that there was no connection between planetary positions at a person's birth and his future development. He had some previous examples before him: a rather superficial investigation by the famous psychologist C. G. Jung into the astrological relationships of married couples, which he had abandoned as the results became progressively more inconclusive, a vast accumulation of data by K. E. Krafft, the Swiss who was rumoured to have been Hitler's private astrologer, and a statistical analysis by the French astrologer Paul Choissard, who claimed significant results in such relationships as Sun-Mars in cases of premature death, Mercury-Moon in the nativities of philosophers, Sun-Moon in those of celebrities, and the aspects of Mars in the birth charts of soldiers.

Gauquelin began by comparing the horoscopes of some 25,000 subjects; in France and other countries where it is legally required to register the time of birth of a child, it is possible to calculate accurate horoscopes from birth certificates without the necessity of approaching the individuals concerned. He was soon able to state with confidence that there were no grounds for the wild claims made by Krafft and Choissard. There



The signs of success

was, however, a lesser piece of research carried out by another French astrologer, Leon Lasson, who had found a significant correlation between Mars and its aspects with the ascendants or descendants of 134 politicians, between Venus and its aspects with the ascendants of 190 artists, and between Mercury and the ascendants or descendants of 209 actors and writers.

Putting his data to this test, Gauquelin was surprised to discover that he obtained the same kind of correlation. Taking a sample of no less than 576 eminent professors of medicine, he found that an unexpectedly high proportion were born just after Mars or Saturn had risen or passed the mid-heaven. In a second group of 508 leading doctors, he obtained a comparable correlation, and he calculated that the odds against this being a matter of pure chance were of the order of 1 million to one.

Fortunately for us – though less happily for himself, for he subsequently became the

Above: traditionally Saturn, seen here in an illustration from the 15th-century codex *De sphaera*, exerts his influence over activities that require mature judgement. The French statistician Michel Gauquelin found the position of Saturn to be particularly significant in the horoscopes of scientists and doctors

Right: Karl Ernst Krafft, a Swiss astrologer, who moved to Germany in 1939. He correctly predicted that Hitler's life would be in danger between 7 and 10 November; in the event, Hitler made a narrow escape when a bomb exploded in a Munich beer cellar



target of much bitter criticism from the scientific establishment – Gauquelin decided to pursue this line of investigation further. From all over France he collected birth data for groups of eminent soldiers, politicians, writers, sportsmen and clerics. In every case, they showed a distinct correlation between the position of certain planets at birth with the subsequent career of the subject. Great soldiers, for instance, tended to have Mars or Jupiter just past the ascendant or the mid-heaven in their horoscopes. Gauquelin calculated that the probability that this was due to chance was as high as one in five million in certain groups.

Statistics and pulp romance

Even more remarkably, Gauquelin discovered that these significant results applied only to those who were truly successful. For instance, in a group of 1458 scientists who had never won a prize, made any important discovery or published more than run-of-the-mill research papers, there was no suggestion of significance in the position of Mars, Jupiter or Saturn at the time of birth.

Gauquelin's results provoked a great deal of interest in the French popular press, but for a long time the scientific community could not be persuaded to comment. At length Jean Porte, administrator of the Institute of Statistics, replied that the figures applied only to France: they revealed some kind of national characteristic that had nothing to do with astrology, and the same methods, applied to other countries, would produce quite different results. (Astrologers have pointed out the flaw in Porte's argument: if a different set of correlations for



Above: the French statistician Michel Gauquelin, who set out to disprove the standard beliefs of astrology. His research led him to a number of unexpected discoveries

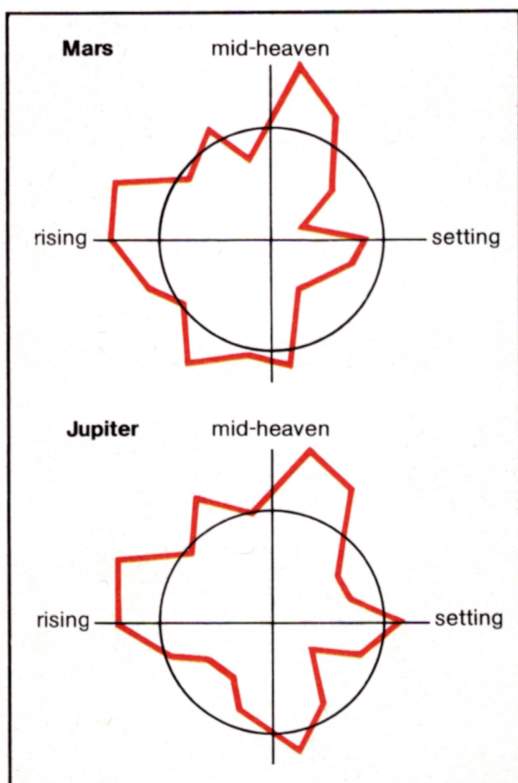
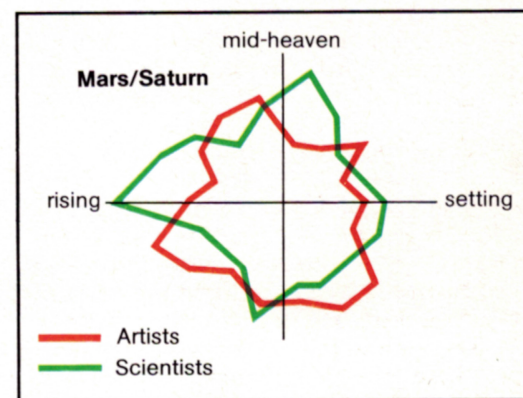
Right: graphs showing the positions of Mars and Saturn, combined as a single line, in the horoscopes of 3305 scientists and 2048 musicians and painters. The graph for scientists is well above average at rising and at mid-heaven, whereas the graph for musicians and painters is significantly below average in these positions

another country were discovered, it would only strengthen their belief that *all* planetary positions are significant in the horoscope.)

A committee of Belgian scientists had been set up in 1953 expressly to study paranormal phenomena; a member of this committee, Marcel Boll, commented:

Your conclusions are nothing but pulp-romances, the worst sort of proof, and the issue is without hope; for if you undertook the same inquiry in Great Britain, Germany, the USA or Russia you would come out with nothing but national idiosyncracies.

Challenged, Gauquelin and his wife set out on long journeys through Germany, Italy, Holland and Belgium to collect data from registers of birth. The results obtained after submission of the data to statistical analysis were substantially the same, with some interesting sidelights. It was found, for example, that Mars appeared in the significant positions for Italian soldiers far more frequently than for their German colleagues. Gauquelin



Left: graphs showing the positions of Mars and Jupiter in the horoscopes of 3142 military leaders. The circle represents the average distribution that would be expected in such a large sample, and the solid line indicates the number of people with either planet at a particular angle in their horoscope. Significantly high departures from the average can be seen for planetary positions just above the horizon and just past mid-heaven

pointed out that one would expect Germans, *as a nation*, to be far more warlike than Italians; so that successful German soldiers were far less in need of a powerful Martian influence in their horoscopes, while the Italians would require (as it were) an overdose of militarism.

Science and the stars

Gauquelin and his wife collected birth data for more than 25,000 people. In the charts of 3305 scientists, Mars was found in one or other of the significant positions 666 times, where chance would have predicted 551 – the odds against this were computed at 500,000 to one. In the charts of 3142 military leaders, Mars was associated with the ascendant or the mid-heaven (with an additional small increase at the nadir, the point opposite the mid-heaven) in 634 cases, where chance indicated 524 – the odds being 1 million to one. In the same charts, Jupiter appeared significantly close to the two angles 644 times. And for 1485 athletes, Mars appeared at the significant angles 327 times, against a chance level of 248.

A number of control experiments were carried out to give a base with which to

compare Gauquelin's findings. Groups of horoscopes selected at random gave the results expected according to chance; and further examination of the horoscopes of men in subordinate positions continued to reveal little divergence from the norm. It was only those who were successful in their professions who showed the significant planetary positions in their charts.

Analysing the survey results again,

| Rising or setting | Significant high frequency | Average frequency | Significant low frequency |
|-------------------|----------------------------------------------------------------------------------|---------------------------------------------------------------|----------------------------------------------|
| Mars | scientists doctors athletes executives | politicians actors journalists | writers painters musicians |
| Jupiter | team athletes soldiers politicians actors journalists playwrights | painters musicians writers | solo athletes scientists doctors |
| Saturn | scientists doctors | politicians soldiers | actors painters journalists writers |
| Moon | politicians writers | scientists doctors painters musicians journalists | athletes soldiers |

Gauquelin spotted the occurrence of significantly low figures for planetary positions among certain specific groups. The table (above) summarises his analysis of his observations.

While he was pursuing these enquiries, Gauquelin was also looking out for any correlation with the position of the Sun – in other words, for some proof that the sign of the zodiac under which a person is born also affects their future development. He reported that he could find nothing of any statistical significance – but researchers in the USA and in Great Britain pursued this particular line of enquiry and obtained some interesting results. Because birth times are not generally recorded in these two countries, it was possible to work only with dates of birth, in which case the positions of the planets in the zodiac are known, but not their positions in relation to the ascendant or the mid-heaven.

Astrology and the professionals

In the USA, Edmund van Deusen processed 163,953 birth-dates for individuals born in the States and in Canada. In Great Britain, sociologist Joe Cooper, working with Dr Alan Smithers of the University of Bradford, studied some 35,000 birth-dates. Combining the results obtained by these researchers, we

get the following generalisations:

Soldiers: From 16,000 British army officers and 12,000 Americans, it was discovered that a significantly high proportion were born in late summer and early autumn, with peaks appearing in Leo and Scorpio.

Doctors: 6412 British and American doctors show above average figures for birth-dates in summer and autumn; and medical officers in the British army show a marked peaking in Scorpio.

Musicians: From 8932 British and American musicians and composers, an above average proportion were born in Sagittarius, Capricorn, Aquarius and Pisces.

Lawyers: 6677 American lawyers show a peak in Gemini.

Bankers: From 2696 bankers, a significant proportion have birth dates in Virgo.

Politicians: British politicians show a disproportionate tendency to be born in Aries.

Advertising executives and diplomats: The sample was from 7118 advertising agency men and 1834 diplomats. Both showed Gemini as the favoured sign of the zodiac.

Teachers: Van Deusen found that, of 5056 American school-teachers, a significant proportion were born in Leo or Virgo.

Librarians: 5111 American and Canadian librarians showed a marked trend toward Libra.

Authors: From a sample of 3927 British and American writers, a remarkably high proportion were born in Virgo.

Comedians: Cooper and Smithers found a marked tendency for comedians' birthdays to fall in Aquarius, Pisces, Aries, Taurus or Gemini.

It is important to remember that these statements represent statistical analysis of quite large samples. They are not to be explained away by the fact that the graph of births tends to show a peak in February and a trough in December; this kind of variation is allowed for in the calculations.

At about the same time that these findings were published, three British doctors made

Below: Dr Alan Smithers (left) and Joe Cooper studied data compiled from some 35,000 birth-dates, and obtained some remarkable findings



an analysis of some 28,000 cases of patients born between 1921 and 1955 who were admitted to psychiatric wards in 1970 and 1971. They found that 9 per cent more schizophrenics and 7 per cent more manic depressives had been born during the first three months of the year.

From this plethora of statistical information it begins to emerge that there may be more than a little truth in the suggestion advanced earlier, that a person's future development may (at the very least) be affected by the time of year in which he or she is born. Taken in conjunction with Gauquelin's work, it seems to lend strong support to the belief that the traditional tenets of astrology are founded in some kind of empirical data.

Emotional and neurotic

In 1977 a professional astrologer, Jeff Mayo, and one of Britain's most eminent psychologists, Professor Hans Eysenck, got together to investigate another of astrology's claims: that persons born in Cancer, Scorpio or Pisces tend to be unduly emotional and neurotic. Using a standard personality test that had been introduced by Eysenck in 1964, they found a definite correlation between the odd-numbered birth signs (Aries, Gemini, Leo, Libra, Sagittarius and Aquarius) and a tendency to extrovert behaviour; while the even-numbered signs (Taurus, Cancer, Virgo, Scorpio, Capricorn and Pisces) were associated with introversion. Furthermore, they showed that Cancer, Scorpio and Pisces – and, to Jeff Mayo's



Above: Professor Hans Eysenck, of the Institute of Psychiatry in the University of London, who has publicly declared his growing belief in astrology

Further reading

Michel Gauquelin, *The cosmic clocks*, Peter Owen 1969

Guy Lyon Playfair and Scott Hill, *The cycles of heaven*, Pan 1979

John Anthony West and Jan Gerhard Toonder, *The case for astrology*, Penguin 1973

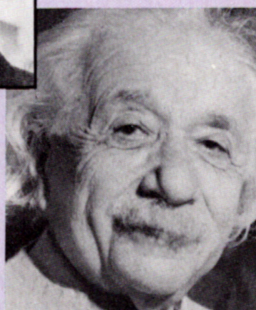
considerable surprise, Aries – were statistically linked with emotional and neurotic personalities.

The most recent research seems to have gone even further toward popular beliefs about astrology than professional astrologers themselves would allow. It was pointed out in the first article in this series that astrologers did not accept the idea of 'compatibility' between those born in particular signs. But one of Eysenck's colleagues, Beverly Steffert, has been investigating the connection between Sun signs and happy marriages; and she believes that she has found that such marriages result when the couple involved were both born in either an even-numbered or an odd-numbered sign.

And there, for the moment, the case rests. Astrology is no longer merely a subject for popular columns in cheap newspapers, or for courses run by members of the mystic fringe for idle housewives. It is considered a suitable subject of study for medical men, statisticians and psychologists. Whether the movements of the planets provoke changes in the gravitational or magnetic fields of the solar system, or induce showers of cosmic radiation, and whether one or more of these influences has a profound (and predictable) effect upon the personality of those about to be born, only a great deal more research will reveal. But it seems true that we have underestimated the knowledge of the ancients: the magicians of Babylon knew rather more about the forces of destiny than we have, until now, given them credit for.

When one looks at those who have achieved some degree of eminence in their professions, it is remarkable how many of them have related birth dates. Albert Einstein and Otto Hahn (below) were both born on 14 March 1879; operatic tenors Baniamino Gigli and Lauritz Melchior (far right) were both born on 20 March 1890. There are many

Astrological twins



other examples; Hermann Göring and Alfred Rosenberg, two prominent members of the Nazi party, were born on the same day and died in the same prison on the same day. Even those whose birthdays fall on the same day, but are separated by a year or two, such as Vincent Price and Peter Cushing (centre) have remarkably similar careers.



Strange tricks of fate



Some people seem to be able to sense in advance the clusterings of random events that we call coincidences, and use them to their advantage. PERROTT PHILLIPS describes some of these cases

IT WAS ONLY WHEN his train steamed into Louisville station that George D. Bryson decided to break his trip to New York and visit the historic Kentucky town. He had never been there before and he had to ask where to find the best hotel. Nobody knew he was in Louisville, and, as a joke, he asked the desk clerk at the Brown Hotel, 'Any mail for me?' He was astonished when the clerk handed over a letter addressed to him and bearing his room number. The previous occupant of Room 307 had been another, and entirely different, George D. Bryson.

A remarkable coincidence, by any standards, but made particularly piquant by the fact that the man who tells it most frequently is Dr Warren Weaver, the American mathematician and expert on probabilities, who believes in the theory that coincidences are governed by the laws of chance, and rejects any suggestion of the uncanny or paranormal in coincidences.

On the opposite side of the fence are those who follow the 'seriality' or 'synchronicity'

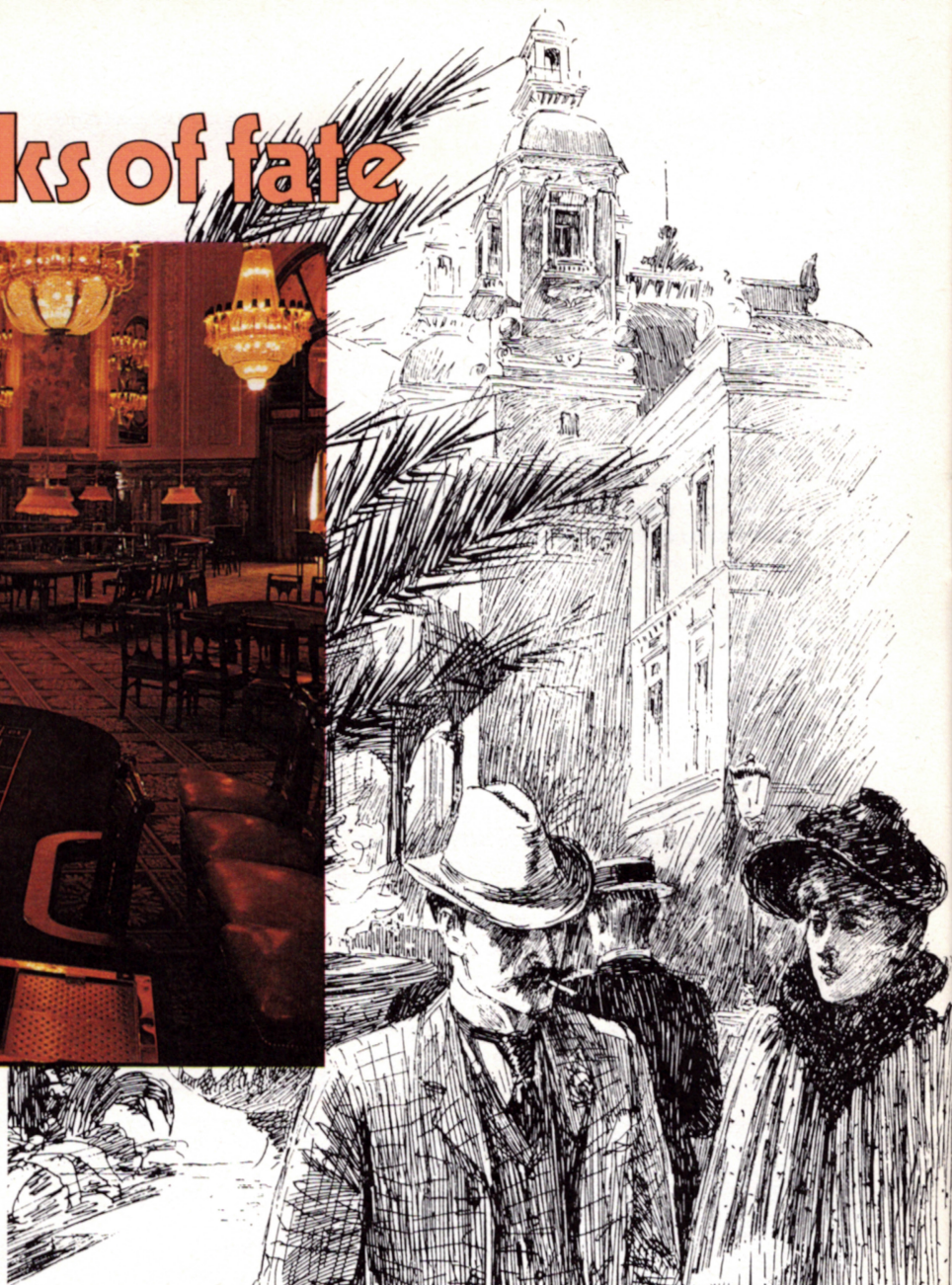
In 1891 an unknown Englishman named Charles Wells became an overnight sensation as *The man that broke the bank at Monte Carlo*, as a music-hall song later called him. Using no apparent system, he three times 'broke' the 100,000-franc 'bank' allocated to his roulette table at the famous Monte Carlo casino (seen as it is today, above left; in a contemporary drawing from the *Illustrated London News*, above right). Can coincidence explain how Wells was somehow able to sense the winning numbers? We shall never know; after winning for the third time, Wells disappeared, taking his secret with him. He was never seen again

theories of Dr Paul Kammerer, Wolfgang Pauli, and Carl Gustav Jung.

Although the three men approached the theory of coincidences from different directions, their conclusions all hinted at a mysterious and barely understood force at work in the Universe, a force that was trying to impose its own kind of order on the chaos of our world. Modern scientific research, particularly in the fields of biology and physics, also seems to suggest a basic tendency of nature to create order out of chaos.

The sceptics, however, stand firm. When events are happening at random, they argue, you are bound to encounter the clusterings we call 'coincidence'. It is even possible to predict such clusterings or, at least, to predict the frequency with which they are likely to happen.

If you toss a coin many times, the laws of probability dictate that you will end up with an almost equal number of heads and tails. However, the heads and tails will not alternate. There will be runs of one and runs of



the other. Dr Weaver calculates that, if you toss a coin 1024 times, for instance, it is likely that there will be one run of eight tails in a row, two of seven in a row, four of six in a row and eight runs of five in a row.

The same is true of roulette. 'Evens' once came up 28 times in succession at Monte Carlo casino. The odds against this happening are around 268 million to one. Yet the randomness experts claim that, as it *could* happen, it did happen – and will happen again somewhere in the world if enough roulette wheels keep spinning long enough.

Mathematicians use this law, for example, to explain the fantastic series of winning numbers that earned Charles Wells the title – in song – of *The man that broke the bank at Monte Carlo*.

Wells – a fat and slightly sinister Englishman – became the subject of the popular music-hall ditty in 1891, when he broke the bank at the Monte Carlo casino three times. He used no apparent system, but put even money bets on red and black, winning nearly every time until he finally exceeded the 100,000 francs 'bank' allocated to each table. On each occasion, attendants lugubriously covered the table with a black 'mourning' cloth and closed it for the rest of the day. The third and last time Wells appeared at the casino, he placed his opening bet on number five, at odds of 35 to 1. He won. He left his original bet and added his winnings to it. Five came up again. This happened five times in succession. Out came the black



Above: Dr Warren Weaver, the American mathematician and probability expert whose study of coincidence has led him to oppose any suggestion that a paranormal force is involved

When a commuter train plunged from an open drawbridge into Newark Bay in New York (below), over 30 people lost their lives. By an ironic coincidence, this tragic incident won many New Yorkers large sums of money. A newspaper picture of the accident (left) showed the number 932 on the rear coach of the train, and many people, sensing some meaning in the number, put their money on it in the Manhattan numbers game – and won

cloth. And out went Wells with his winnings, never to be seen there again.

The seriality and synchronicity theorists – and those who have extended the work of Kammerer, Pauli and Jung – accept the idea of 'clusters' of numbers. But they see 'luck' and 'coincidence' as two sides of the same coin. The classic paranormal concepts of ESP, telepathy and precognition – recurring elements in coincidences – might offer an alternative explanation of why some people are 'luckier' than others.

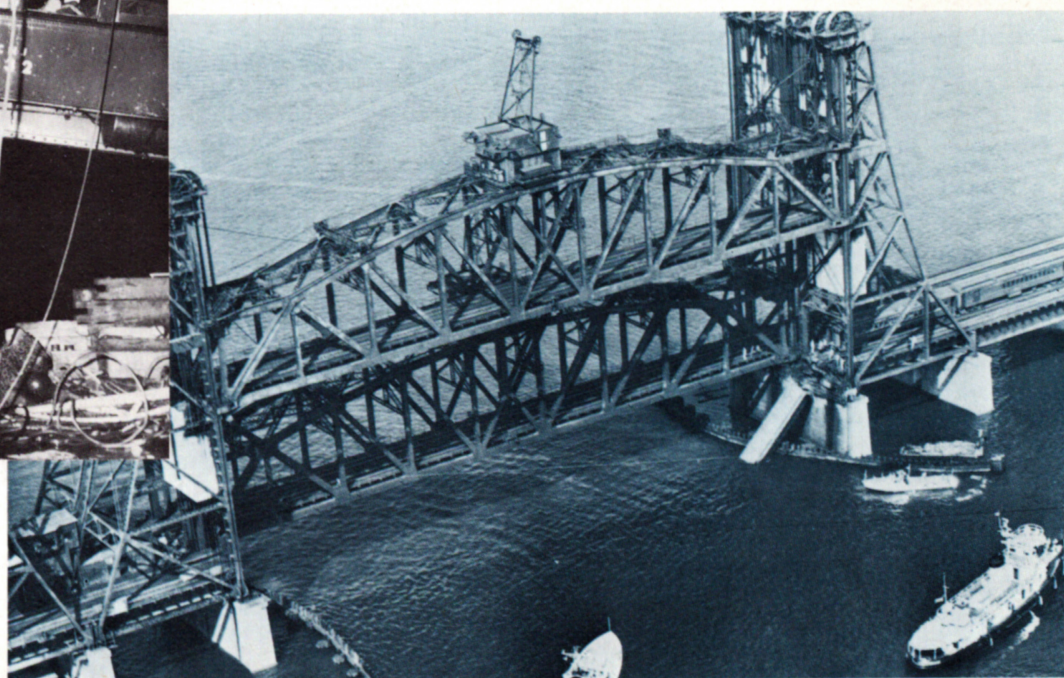
Modern research breaks coincidences down into two distinct types: trivial (like spinning coins, runs of numbers and amazing hands of cards) and significant. Significant coincidences are those that shuffle together people, events, space and time – past, present and future – in a manner that seems to cross the delicate borderline into the doubtful region of the paranormal.

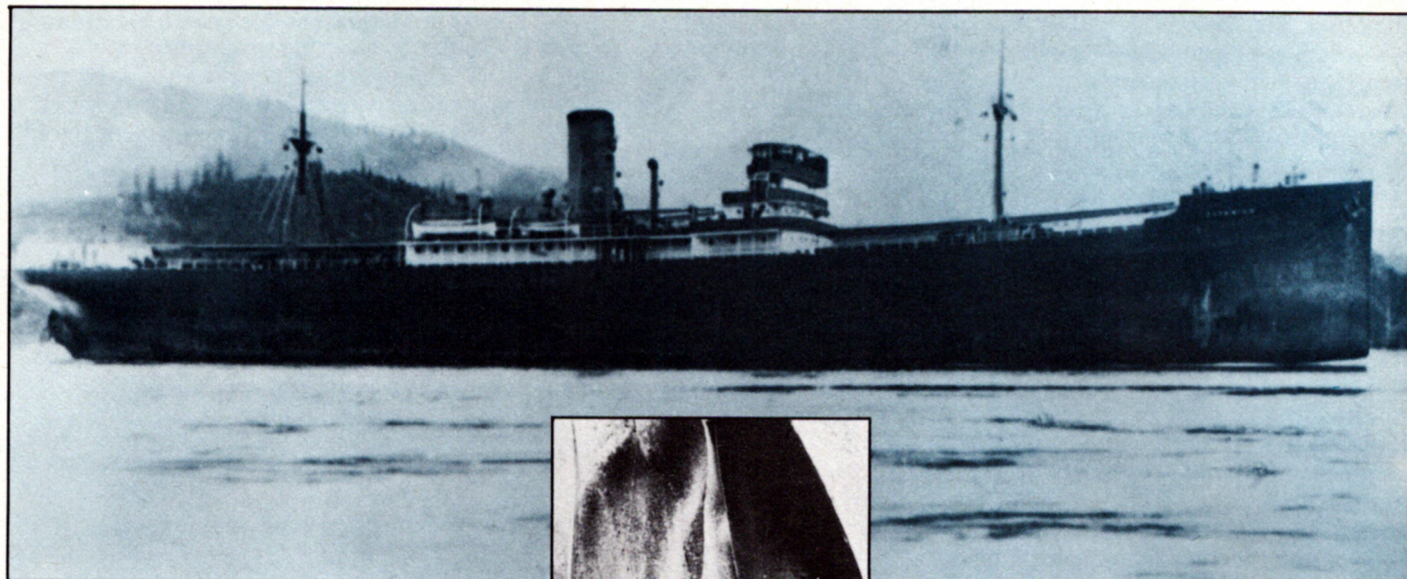
Macabre significance

Sometimes a coincidence occurs that seems to link, almost capriciously, the rival theories. After a New York commuter train plunged into Newark Bay – killing many passengers – work started on recovering the coaches from the water. One front-page newspaper picture showed the rear coach being winched up, with the number 932 clearly visible on its side. That day, the number 932 came up in the Manhattan numbers game, winning hundreds of thousands of dollars for the hordes of people who – sensing an occult significance in the number – had put their money on it.

Modern researchers now divide significant coincidences into several categories. One is the warning coincidence, with its presentiment of danger or disaster.

Warning coincidences often have an extraordinarily long reach, which is why many





are ignored or go unrecognised. That was certainly the case with three ships, the *Titan*, the *Titanic* and the *Titanian*. In 1898, the American writer Morgan Robertson published a novel about a giant liner, the *Titan*, which sank one freezing April night in the Atlantic after hitting an iceberg on her maiden voyage.

Fourteen years later – in one of the world's worst sea disasters – the *Titanic* sank on a freezing April night in the Atlantic after hitting an iceberg on her maiden voyage.

The coincidences did not end there. The ships, both fact and fiction, were around the same tonnage and both disasters occurred in the same stretch of the ocean. Both liners were regarded as 'unsinkable', and neither carried sufficient lifeboats.

Coincidence and premonition

With the extraordinary story of the *Titanian*, the *Titan-Titanic* coincidences begin to defy human belief. On watch one night in April 1935 – during the *Titanian's* coal-run from the Tyne to Canada – crewman William Reeves began to feel a strong sense of foreboding. By the time the *Titanian* reached the spot where the two other ships had gone down, the feeling was overpowering. Could Reeves stop the ship merely because of a premonition? One thing – a further coincidence – made the decision for him. He had been born on the day of the *Titanic* disaster. 'Danger ahead!' he bellowed to the bridge. The words were barely out of his mouth when an iceberg loomed out of the darkness. The ship avoided it just in time.

Another category is the 'it's-a-small-world coincidence', which brings together people and places when least expected – a phenomenon vouched for by Arthur Butterworth, of Skipton, Yorkshire.

During the Second World War, while serving in the army, he ordered a secondhand book on music from a London bookseller. The book eventually reached him at his camp



Coincidence links the fates of the *Titanian* (above) and the famous *Titanic*. Both hit icebergs in the same waters; but the *Titanian* survived

Below: Charles Coghlan, whose dead body made an immense sea journey before being cast up on the shore of his home town



– disguised by the usual military postcode – in the grounds of Taverham Hall, near Norwich. Standing at the window of his army hut, he opened the parcel and, as he did so, a picture postcard – presumably used as a bookmark – fell out. The writing on one side showed the postcard had been written on 4 August 1913. To his astonishment, when he turned it over, the picture showed 'the exact view I had from my hut window at that very moment . . . Taverham Hall.'

If coincidence can reach so easily across time and space in its quest for 'order out of chaos', it is not surprising that it can stretch beyond the grave, too.

While on a tour of Texas in 1899, the Canadian actor Charles Francis Coghlan was taken ill in Galveston and died. It was too far to return his remains to his home on Prince Edward Island, in the Gulf of St Lawrence – more than 3500 miles (5600 kilometres) away by the sea-route – and he was buried in a lead coffin inside a granite vault. His bones had rested less than a year when the great hurricane of September 1900 hit Galveston Island, flooding the cemetery. The vault was shattered and Coghlan's coffin floated out into the Gulf of Mexico. Slowly, it drifted along the Florida coastline and into the Atlantic, where the Gulf Stream picked it up and carried it northwards.

Eight years passed. Then, one day in October 1908, some fishermen on Prince Edward Island spotted a long, weather-scarred box floating near the shore. Coghlan's body had come home. With respect mingled with awe, his fellow islanders buried the actor in the nearby church where he had been christened as a baby.

Chance? Destiny? A mere trick of 'randomness'? Or that strange and powerful force, striving to make sense of the Universe, that some call coincidence?

On page 658 we take a closer look at the theory of synchronicity developed by C.G. Jung

Dear Sir,

You may be interested in a strange experience that I, and most of my brothers and sisters, had many times when we were youngsters.

We lived in an old three-storey house in Liverpool, and we children had a playroom on the top floor. We often used to run up and down the stairs to the floor below, and it was on this staircase that we experienced a strange phenomenon. We would be at the top of the stairs, about to run down, when we became aware of a strange but pleasant feeling of weightlessness, as though we were being carried. When this feeling ceased, we would find ourselves at the foot of the stairs – but would have no recollection of having actually descended the stairs.

This happened to each of us, individually, on many separate occasions, but never when there was more than one of us descending the stairs. We were never 'carried' upstairs, only down.

Although puzzled, we were never frightened by the experience. Unfortunately, as each of us got older we stopped experiencing the phenomenon and had to go downstairs in a more conventional manner!

Reading *The Unexplained*, I have come across a few possible explanations for my experience. It could have been levitation, or perhaps teleportation. We had our own fantasy explanation – the ghost of a past nanny of the house was carrying us safely down the steep stairs!

Yours faithfully,

Angela McHarron (Miss) Liverpool, Merseyside

Dear Sir,

I was interested to read your request for accounts of experiences of premonitions (*The Unexplained*, issue 8). My own experiences are of what I call symbolic premonitions – actual visual dreams of a minor event that subsequently occurs in real life – telepathy and, arguably, telekinesis. I am a police officer, and consider myself reasonably level-headed. The experience I should like to tell you about is a symbolic premonition, and I can assure you it actually happened.

At the time, I was 23 years old and a rather destitute and flamboyant professional disc jockey, with no money or prospects. I had met a girl in one of my discos, in fact a rather posh tennis club dance, and eventually this girl began to come with us to the various discos we ran. She was a professional girl, a senior radiographer at a local hospital, who came from a good family and was always impeccably dressed, and I had no illusions about my chances of having a lasting relationship with her, until one night I had my dream.

It may sound silly, but this is what happened in the dream. I was a priest, and on a particular day I had, along with the other priests, to go to a place where there was a long row of small temples with a large one at the end. Our task was to lay out a display in our own small temple to try to impress our goddess. We drew lots for the temples, and mine was the last before the large temple. Dennis, my roadie, had the one next to mine. I did my display – I wasn't all that

bothered really – and waited, and eventually I saw the 'goddess' appear and begin to inspect the displays in the little temples, starting at the far end. She was dressed in a white toga, and as she drew closer I saw it was the girl I had met at the tennis club dance. Eventually she went into Dennis's temple and stayed for a while, and then without looking at me she went into mine. She came out almost immediately and walked back into Dennis's. I thought I had lost her, but then she went back into my temple. She came out smiling and led me into the large temple, where there was a congregation of people in ordinary clothes. A man stood up and turned round, and looked at us unsmilingly. At this, my 'goddess' burst into tears and ran out of the temple. I ran after her and brought her back, and as we entered the temple again the man stood up again, and this time he smiled at us. We walked forward and were married.

The 'goddess' is now my wife, and the man, whom in real life I had never seen before, is her father – who was understandably dismayed at first at his daughter hanging around with the likes of me. I told this dream to my friends at the time and treated it as a joke, as I had only just met her and the last thing on my mind was marriage, let alone to this somewhat aloof female.

Yours faithfully,
John Emmerson

Wakefield, West Yorkshire

Dear Sir,

I was fascinated by your article on disappearances in issue 16 of *The Unexplained*. It reminded me of something very strange that happened to me a few years ago.

It was my custom to sit late at night in the large lounge of my old house. I was sitting in the lighted room – there was a 75-watt bulb burning in a central fitting – when I observed something very strange.

My attention was drawn to the bay window area of the room. The space had filled with a green haze. The actual window was discernible, but I could not see out of it. The small Sheraton table had disappeared, and so had the chairs on either side of it, and the figurines on the table. I looked around the room; everything was normal. The whole experience lasted for about half an hour. I should like to emphasise that I was not in a state of meditation, and my eyes were wide open.

Your account of the US Navy ship *Philadelphia*, with the green haze you mentioned, brought my own experience to mind. I wonder what would have happened if I had stepped into the green haze.

Yours sincerely,
Eileen Bruss

Huntingdon, Cambridgeshire

Erratum: in issue 18, page 343, we printed a photograph that was identified in the caption as showing Aleksandr Kazantsev. In fact, the picture is of Henry Gris, an American journalist who, together with his colleague William Dick, has done much to publicise the Phaeton theory in the West.

THE WORLD'S MYSTERIOUS PLACES

9 The pyramid of the niches, El Tajin

Set in dense jungle in what is now the Veracruz area of Mexico, the great temple known as the pyramid of the niches was built in the fifth century by Totonac Indians. Over 80 feet (24 metres) high, it takes its name from the 365 niches – one for each day of the year – that decorate its sides.

10 The standing stones of Carnac

The megalithic alignments at Carnac, Brittany, France, consist of over 3000 standing stones, arranged in rows stretching for almost a mile (1.5 kilometres), joining two small rings of stones. It is thought that Carnac may once have been used as an astronomical observatory.

11 The ancient walled city of Zimbabwe

Situated in the remote bush land in the south of the country to which it has given its name, the granite walled city of Zimbabwe is an imposing monument to the powerful black civilisation that built it about 900 years ago. The walls are mortarless.

12 Ayers Rock, Australia

Ayers Rock, 2 miles (3 kilometres) long, $1\frac{1}{2}$ miles (2.5 kilometres) wide, towers 2000 feet (335 metres) above the central Australian outback near Alice Springs. Made sacred by generations of Aborigine ritual, it glows a startling variety of different shades of red in the course of a day.

13 Stonehenge

Situated on Salisbury Plain in Wiltshire, Stonehenge is the best known megalithic monument in England. Built some 4600 years ago, it consists of a double circle of huge Welsh *bluestones*, each weighing about 4 tonnes, all originally topped by slightly lighter *sarsens*.

14 Giant Toltec figures at Tula, Mexico

These human figures, built by the Toltecs, one of the oldest and most advanced of the ancient Mesoamerican civilisations, in about the 10th century AD, once formed part of the colonnade at the top of a temple at the Toltec capital Tollan, now Tula, in the Eastern Sierra Madre.

15 Nemrud Dag, Turkey

Built around 30 BC, Nemrud Dag, the tomb of Antiochus I, of Commagene, lies under a huge mound 165 feet (50 metres) high and terraced on three sides. On the terraces stand imposing statues of gods, eagles and lions; many of the heads are as much as 12 feet (4 metres) high.

16 The moving stones of Death Valley, California

Racetrack Playa, a dried-up lake on the edge of Death Valley, is covered with tracks made by mysteriously moving stones, some of them weighing as much as 600 pounds (220 kilograms). Scientists have so far been unable to come up with an explanation.